Easy Collider Editor Documentation (V3.0)

Change Log

3.0: +added automatic rigidbody isKinematic enabling/disabling with log warnings

+added automatic existing collider enabling/disabling with log warnings

+added include child meshes toggle

+added alternate capsule collider creation method

+added toggles to attach colliders to selected object, or to create collider holders

+added toggle to create collider as a trigger

+improved drawing of some colliders during collider selection

+fixed some issues with editing preferences not saving properly

+modified editor window to use more toggles instead of all buttons where appropriate

+added quickstart text to editor window

+added many log warnings to help users with any issues that may occur during use

Details

Easy collider editor is designed to facilitate ease of creation of primitive colliders. By using primitive colliders instead of mesh colliders, rigidbodies can be added to gameobjects to allow for physics interactions. No more painfully adding primitive colliders and positioning and resizing them to fit each mesh. Using Easy Collider Editor you can very quickly, easily, and precisely add multiple primitive colliders to gameobjects.

Installation

It is best to use Unity's built-in import package (Located in Assets > Import package > Custom package) to quickly and easily install Easy Collider Editor.

Or import the package from the asset store by searching and clicking import.

Main Editor Window

Hovering over options in the editor window displays similar information.

Selected Game Object: The currently selected game object you are creating colliders for.

Enable Vertex Select: Checking this box allows you to then select vertices on the selected gameobject.

Enable Collider Select: Allows you to select added colliders so that they can be removed using the button that appears once a collider has been selected.

Attach Colliders to: These options decide if the created colliders will be attached to the selected gameobject, or use colliderholder gameobjects. Rotated colliders cannot be attached to the selected gameobject and must use their own separate RotatedColliderHolder.

Create collider buttons: These are the buttons used to create Box, Sphere, Capsule and

Rotated Box Colliders. These buttons appear once vertices have been selected. Warnings will display that will tell you if an appropriate number of vertices have been selected to properly create the selected collider. For more information on how to select vertices for each collider, see the appropriate information below.

Additional Toggles:
Display Mesh Vertices: Displays the vertices of the mesh vertices currently able to be selected.
Include Child Meshes: Enabling this option allows meshs on child gameobjects to be include in the selectable vertices.
Create Collider as Trigger: Enabling this option marks the isTrigger option on created colliders to true.

Remove all Colliders on Selected GameObject: Clicking this button removes all colliders that exist on the selected gameobject, and it's children if include child meshes has been enabled.

Edit Preferences:
Vertex Display Colour: The colour of the boxes when Display Mesh Vertices is enabled.
Vertex Display Scaling: The scale of the boxes when Display Mesh Vertices is enabled.
Hover Vertex Colour: The colour of the box when hovering over selectable vertices.
Hover Vertex Scaling: The scale of the box when hovering over selectable vertices.
Selected Vertex Colour: The colour of the box of selected vertices.
Selected Vertex Scaling: The scale of the box of selected vertices.
Overlap Selected Vertex Colour: The colour of the box of vertices that have been selected that are are currently being hovered over.
Overlap Selected Vertex Scaling: The scale of the box vertices that have been selected that are are currently being hovered over.
Vert Select KeyCode: The key that is used to select/deselect vertices for collider creation.
Selected Collider Colour: The colour of the lines drawn when a collider is selected using Enable Collider Select.
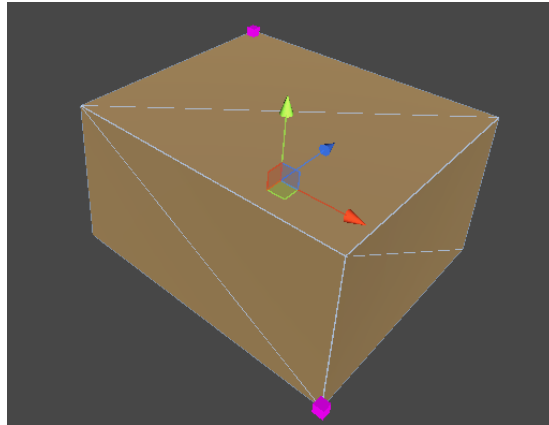
Box Colliders

Figure 1: Selection of cross vertices for box collide generation.

Box colliders are created by selecting the vertices of the box you wish to be encapsulated. This can be accomplished using only 2 vertex points on opposite corners (Figure 1). Additional vertices can be selected to ensure their inclusion in the generated box collider.

Sphere Colliders

Sphere colliders are created by selecting the two vertices on opposite sides of the spherical object. (Figure 2, Figure 3) This can be accomplished using any two opposing points on the sphere, however it is most easily accomplished using the end-caps of a spherical object. Many vertices can also be selected around a spherical object, and the script will attempt to create a sphere collider that should best fit those points.
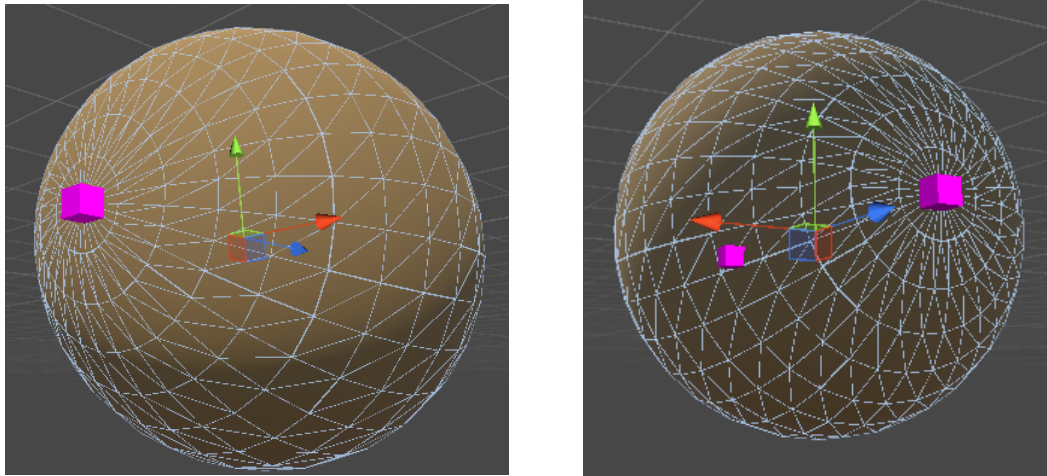
Figure 2,3: Opposite vertices on sphere colliders are selected for sphere collider creation.
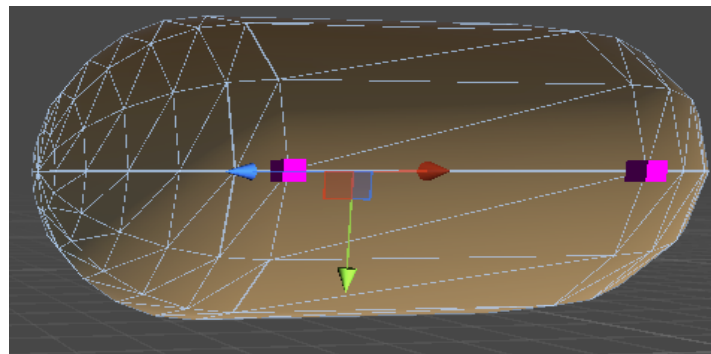
Capsule Colliders

Figure 4: Selection of first two vertex points for capsule collider generation

Capsule colliders are using the selection of 4 vertex points. The first two points are selected in a horizontal or vertical line along the length of the capsule shape (Figure 4). The third vertex point is a point anywhere on the spherical part of the capsule object (Figure 5). The final vertex point is selected directly across from one of the first vertex points, on the side closest to the vertex point located on the spherical part (Figure 5). Both methods of capsule creationg, regular and alternate use 4 points to create the collider. However, the alternate method is better as dealing with more than 4 points select, which can function better in certain situations.
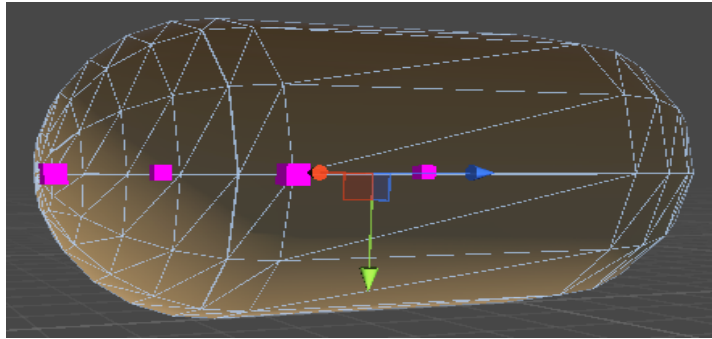
Figure 5: Selection of last two vertex points for capsule collider generation

Rotated Box Colliders

Rotated box colliders are created by selecting 4 vertices. A corner vertex of the box is chosen, and 3 additional vertex points representing the connected edges to that corner point are also chosen. If the rotated box collider that has been generated does not properly fit, try using a different corner vertex. Proper selection of vertices can be seen in Figure 6.
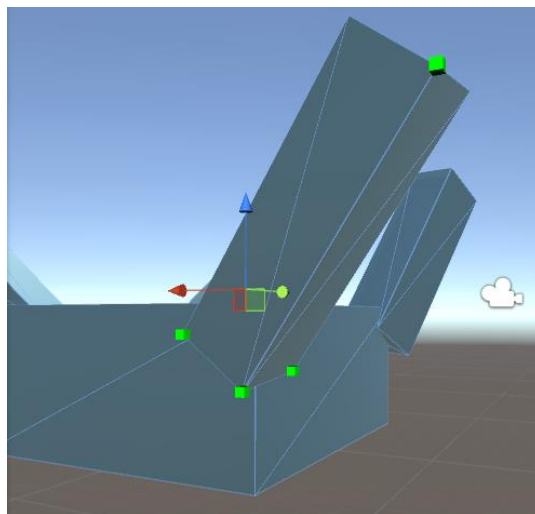

Figure 6: Selection of vertices for rotated box collider generation

FAQ:

1. I am unable to select vertices on my object!

This can occur if non-kinematic rigidbodies are present with non-convex mesh colliders. These do not respond properly to the raycasts used during vertex selection. Although this version should properly handle this problem, it can still occur if a non-kinematic rigidbody is on a parent of the selected gameobject.

2. The collider did not generate correctly.

Please refer to the included documentation of proper selection of vertices above for collider generation.

3. I have additional primitive colliders I have access to, are these supported?

Unfortunately at this time, generation of any additional primitive colliders other than the officially included, sphere, box, and capsule colliders are unsupported.

4. I have a great idea for additional features that could be added, will you add these?

I would be happy to look into adding any additional features for my customers, please feel free to contact me at pmurph.software@gmail.com. However, please understand that not all requested features are guaranteed to be added. I will try to get back to any received e-mail as quickly as I can.

5. I encountered other problems not listed here. (Bugs)

I would love to further improve this asset! If any bugs are encountered, please let me know so I can fix them for everybody. Please send me an e-mail at pmurph.software@gmail.com. It would be helpful to find and fix the bug if as much information as possible about what was occurring is included. (ie. Any manual removal of components, what button was clicked that generated the unexpected problem or error, version of unity, etc.)

6. Any other questions:

Please contact me at pmurph.software@gmail.com